Global Response 3: Travel Time and Standard Methodology

The travel time standard defined in the San Diego County General Plan applies various travel time standards based on Land Use Designations. This is separate from total response time and assumes call processing times and turnout/reflex times meet typical averages. Travel time is the most appropriate portion of the total response time to focus on because this, in large part, determines the geographic distribution of fire stations.

The San Diego County Fire Authority (SDCFA) calculates travel time using the formula found in the National Fire Protection Association (NFPA) 1142 Standard. The travel time formula in this standard is essentially the same as the Insurance Services Office, Inc. (ISO) travel time formula except that the NFPA formula allows for the input of different speed constants. The formulas were developed from a study that was conducted by the Rand Corporation and are a nationally recognized method of determining travel time for fire apparatus. Both formulas contain a friction coefficient that accounts for acceleration/deceleration and other impedances such as intersections etc.

Based on the proposed Land Use Designation for the proposed Project, the travel time standard of 5 minutes is applicable. In reviewing the travel time data for the Village 13 Resort, the posted speed limits were used in the formula for established roadways leading to the project site (from existing fire stations) and a 35-mph speed constant was used in the formula to calculate travel times from the proposed fire station locations (temporary and permanent) to the furthest parcels in the project site.

Global Response 4: Fire Service Provision

As a condition of development, Alternative H will provide a new fire station (FS 34) for the SDCFA, which will be located to provide no greater than a 5-minute travel time to the furthest occupied parcel in the project site. Prior to the construction of the permanent on-site station, a temporary facility will be operational prior to the first occupancy in development. A Fire Protection and Mitigation Term Sheet has been negotiated and will be executed prior to the project approval by the Board of Supervisors which details temporary and permanent fire services and facilities. The Fire Safety – Otay Ranch Village 13 Memorandum dated March 19, 2020, will be included as an attachment to the County of San Diego Planning Commission Report for Alternative H.

The station will house a Type I structural fire engine with Advanced Life Support (ALS) capabilities and will be staffed with three CAL FIRE firefighters and a SDCFA reserve firefighter. Additionally, a CAL FIRE Type II structural/wildland interface engine company with a minimum of three CAL FIRE firefighters will be relocated to this station for a total of seven firefighters. Further enhancing the emergency medical response, the Zone 2 EOA Emergency Medical Service Provider (Mercy Ambulance) will be relocating an ALS transport ambulance to this station as well.

Pursuant to Section 4.4.2 of the Fire Protection Plan (Appendix C-21) all habitable structures regardless of occupancy classification, building type or use, be equipped with an automatic fire sprinkler system in accordance with the appropriate National Fire Protection Association (NFPA) Standard. This requirement exceeds state model building and fire code requirements and is specifically intended to improve firefighter and public safety, minimize fire damage, and limit environmental impacts.

In addition, SDCFA has executed an intergovernmental agreement that has provides funding for additional staffing and a 103’ Quint Aerial Truck Company that is located at the existing SDCFA Jamul Fire Station (FS 36). This apparatus is staffed with four CAL FIRE firefighters with ALS capabilities and

is in addition to the existing Type I structural fire engine that is assigned to this station with a separate crew of three CAL FIRE firefighters with ALS capabilities that cross-staff a Heavy Rescue Unit and a Type VI apparatus. Total SDCFA staffing at FS 36 will be seven CAL FIRE firefighters. Additionally, through a cooperative agreement, FS 36 also houses 2 U.S. Fish and Wildlife Service (USFWS) Type III wildland fire engines staffed with four career USFWS firefighters each and there is an ALS transport ambulance from Mercy Ambulance at this fire station also. Total combined staffing at FS 36 is 17 emergency personnel.

The SDCFA Otay fire station (FS 38) has a 105' Quint Aerial Truck Company that is staffed with 4 CAL FIRE career firefighters with ALS capabilities and there is also a Type I reserve structural fire engine at this station. A separate developer agreement in the Otay Mesa area also fund additional career staffing for the Type I structural fire engine at FS 38 which will consist of 3 career CAL FIRE firefighters with ALS capabilities and one SDCFA reserve firefighter. The SDCFA Deerhorn Valley fire station (FS 37) has a Type I structural fire engine and is staffed with 2 CAL FIRE career firefighters with ALS capabilities and 1-2 SDCFA reserve firefighters. Lastly, the County has an Amador Agreement to fund staffing at CAL FIRE FS 30 located in Dulzura and, as a result, this station is staffed with three CAL FIRE career firefighters that respond on a Type III wildland interface fire engine throughout the year.

All of these assets will be available to support fire and emergency responses in the proposed Project and surrounding areas in accordance with the SDCFA Standard Response Plan.

The cumulative response from the above referenced fire stations includes 36 emergency services personnel (25 CAL FIRE/SDCFA firefighters, 8 USFWS career firefighters and 2 ALS transport paramedics) on 7 fire apparatus (various configurations) and two ALS transport ambulances. The estimated travel time from the closest SDCFA fire station (which is staffed with 7 firefighters) to the most remote parcel in the project site is 3.8 minutes using NFPA 1142 travel time standard. The estimated travel time from the furthest SDCFA fire station listed above (which is staffed with 4 firefighters) to the most remote parcel in the V-13 Resort is 21.3 minutes. (See Global Fire Response 4 for methodology used for V-13 Resort travel time analysis).

In summary, with the additional staffing and equipment located in the newly constructed FS 34 in the Village 13 Resort, the SDCFA is able to meet the 5-minute travel time standard in the County General Plan Safety Element. This, combined with the previously mentioned additional and strategically positioned existing resources and the inclusion of project design features designed to improve firefighter and public safety, are sufficient to provide appropriate emergency fire and EMS services to the V-13 Resort.

Notwithstanding this, it is clear that maintaining (or modifying and extending) the existing automatic aid agreement with the Chula Vista Fire Department would be a benefit to both agencies and is a cost effective and efficient way to enhance the operational response capabilities in both the Village 13 Resort and the City of Chula Vista which will result in regional public benefits.

Global Response 5: Determining Adequacy of Response/NFPA 1710

The SDCFA Standard Response Plan (SRP) and Standards of Cover (SOC) collectively define the appropriate levels of response to various emergency incidents for a given location. These documents are developed by strategically analyzing a variety of criteria including (but not limited to): the nature of area (ranging from undeveloped wildland areas to high density urban developments), condition of the built environment (new construction vs. existing development, presence of fixed fire suppression systems etc.),

task level analysis of firefighters for various incident types and the distribution and concentration of existing firefighting resources. Additionally, this strategic analysis also includes review of the most current state and national standards (including NFPA 1710) as well as local, state and national trends related to contemporary fire service delivery. For new developments, a strong emphasis is placed on pre-fire engineering strategies that enhance overall emergency response capabilities and improve public and firefighter safety. The SRP and SOC are periodically reviewed and adjusted to ensure currency and relevance in response to changing conditions.

While the SDCFA may reference NFPA 1710 (as well as many other state and national standards) when evaluating the adequacy of fire services and emergency responses for a given project, these standards are not necessarily used as a strict regulatory tool to establish mandatory minimum standards of response. This approach is far too linear in nature and may not consider many variables that can affect the task level work of firefighters and may also overlook potential opportunities for improving public safety as well as firefighter safety and survivability on the fire ground.

NFPA 1710 prescribes, among other things, recommendations related to staffing levels, however, it should be noted that this standard also acknowledges and allows for the use of alternative methods or approaches of equivalent performance to those prescribed by the standard. To that end, the SDCFA requires that all habitable structures, regardless of occupancy classification, building type or use, be equipped with an automatic fire sprinkler system in accordance with the appropriate National Fire Protection Association (NFPA) Standard. This requirement is in excess of state model building and fire code requirements and is specifically intended to improve firefighter and public safety, minimize fire damage and limit environmental impacts. By affecting built environment in this way, the typical early stages of fire development can be dramatically altered which limits fire spread and the potential for flashover conditions to develop. This significantly improves firefighter safety and survivability as well as public safety. Prompt intervention in the early stages of fire development can also present an opportunity to adjust the task level work of firefighters which in turn, may affect the number of firefighters that are needed to establish an effective firefighting force and their total travel time to arrive.

National and state model fire codes tend to validate this strategy by allowing substantial reductions in fire flow requirements for certain structures where automatic fire sprinkler systems are installed. This is because automatic fire sprinkler systems are very effective at containing and/or extinguishing fires in the early stages of development thereby preventing large uncontrolled fires that require large fire flows to control. It could, therefore, be presumed that the substantial numbers of firefighters ordinarily needed to quickly develop and then maintain significant fire flows for long periods of time could theoretically be adjusted by some increment.